Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of

DISH OPERATING L.L.C.

Application for Blanket Earth Station License to Operate with Ciel-6i, a Canadian Licensed 17/24 GHz BSS Payload at 103° W.L. IBFS File Nos. SES-LFS-20140924-00752 SES-AMD-20150409-00205

COMMENTS OF DIRECTV ENTERPRISES, LLC

DIRECTV Enterprises, LLC ("DIRECTV") hereby comments on the above referenced request by DISH Operating L.L.C. ("DISH") for authority to operate up to 50,000 earth station in the United States for the purpose of receiving service from Ciel-6i, a Canadian-licensed 17/24 GHz Broadcasting-Satellite Service ("BSS") payload on the in-orbit SES-3 satellite at the 103° W.L. orbital location. DIRECTV holds the Commission-issued license to operate DIRECTV RB-2, a 17/24 GHz BSS space station, at the same orbital location providing service throughout the United States (including Alaska, Hawaii and Puerto Rico). DIRECTV has no objection to DISH's proposed operations, so long as any authorization granted in this proceeding is conditioned upon compliance with the coordination agreement between the United States and Canada for 17/24 GHz BSS operations at the 103° W.L. orbital location.

See DIRECTV Enterprises, LLC, 24 FCC Rcd. 9393 (Int'l Bur. 2009), recon. denied, 27 FCC Rcd. 5932 (Int'l Bur. 2012); Grant Stamp, IBFS File No. SAT-MOD- 20110727-00136 (Oct. 26, 2011).

DIRECTV has been authorized to provide service throughout the U.S. using the 17.3-17.7 GHz downlink band. In this proceeding, DISH seeks authority to receive downlink transmissions from Ciel-6i using the same 400 MHz of spectrum, using carrier bandwidths of 3.75 to 390 MHz to support various broadcast formats.² At the time DISH filed its application, coordination between the U.S. and Canadian 17/24 GHz BSS systems at the nominal 103° W.L. location had not yet been completed. Accordingly, DISH did not consider the implications of either protecting DIRECTV's operations in the band at this slot or accepting interference from those operations.³

Last month, the administrations of Canada and the United States entered into a coordination agreement for their licensees' respective satellite network operations at the 103° W.L. orbital location. Accordingly, both Ciel and DIRECTV are now obligated to operate at this slot in conformity with the terms of that agreement. DIRECTV has no objection to Ciel providing service in the United States – including the service proposed in this proceeding by DISH – so long as that service is consistent with the parameters agreed to in international coordination. Unfortunately, some of the operating parameters requested by DISH are inconsistent with those terms. In these circumstances, any authorization granted to DISH must be explicitly conditioned upon compliance with the terms of the U.S.-Canada coordination agreement.

There are two other aspect of this situation that are worth noting. First, DIRECTV holds an authorization from the Commission to operate a 17/24 GHz BSS space station at the nominal 99°

See Application for Blanket Earth Station License, IBFS File No. SES-LFS-0924-00752, at 3 (Sep. 24, 2014) ("DISH App.").

³ See, e.g., id., Attachment A, at 8 ("Coordination of the RB-2 satellite with Ciel-6i is not complete. Accordingly, the RB-2 satellite is not entitled to protection from interference from the Ciel-6i satellite, nor can it cause harmful interference to Ciel-6i, until coordination is complete.").

W.L. orbital location.⁴ In order to perfect the rights for this system at the International Telecommunication Union, DIRECTV must pursue coordination with other 17/24 GHz BSS networks within sixteen degrees of orbital arc. This includes Ciel 6i at 103° W.L., and DIRECTV is currently engaged in coordination discussions with Ciel. However, it has been informed that Ciel's customer – DISH – will also have to be a participant in those discussions. In its Application, DISH provided link budgets for its proposed operations that include the interference effects of DIRECTV's adjacent satellite network at 99° W.L., assuming operations at maximum power and with worst-case station-keeping.⁵ Based on its analysis, DISH concludes that "the proposed services can successfully operate given the assumed interference environment." Accordingly, DIRECTV does not anticipate any difficulty in concluding coordination with Ciel (and DISH) with respect to its operations at 99° W.L.

Second, DISH seeks a waiver of the full frequency reuse requirements of Section 25.210(f). As DISH explains, Ciel-6i uses both polarizations on downlink transmissions but only one polarization on uplink transmissions. Such a design is highly inefficient, as the content uplinked in one polarization is downlinked twice to the same coverage area using two polarizations. Because any other operator uplinking in the unused polarization to a satellite at 103° W.L. would necessarily interfere with Ciel's downlink on one or the other polarization, this design effectively sterilizes half of the 17/24 GHz BSS spectrum used by the satellite. That is clearly antithetical to the spectral efficiency objective underlying the rule. As the Commission has explained,

See Grant Stamp, IBFS File Nos. SAT-LOA-20060908-00099, SAT-AMD-20080114-00013, and SAT-AMD-20080321-00075 (July 28, 2009).

⁵ See DISH App., Attachment A, at 5.

⁶ *Id.*

⁷ DISH App. at 8.

Full frequency reuse allows satellites to double their capacity by using both horizontal and vertical polarization. In adopting this requirement, the Commission sought to maximize use of the scarce orbit/spectrum resource. It noted that assigning orbital locations to satellites that did not achieve state-of-the-art capacity could preclude the operation of more efficient designs to the detriment of the public's ability to obtain a sufficient supply of transponder capacity. To this end, the Commission has denied applications that did not meet the full frequency reuse requirement as early as 1985.8

DIRECTV does not object to grant of the requested waiver in this particular case, since both DIRECTV and Ciel can operate at this slot pursuant to the U.S.-Canada coordination agreement. However, the Commission should make clear in granting the requested waiver that satellites designed in this way will not be favorably received in other circumstances.

Respectfully submitted,

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⁸ PanAmSat Licensee Corp., 19 FCC Rcd. 2012, ¶ 8 (Int'l Bur. 2004).

CERTIFICATE OF SERVICE

I hereby certify that, on this 22^{nd} day of May, 2015, a copy of the foregoing Comments was served by U.S. mail upon:

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